City of Orlando
COMMUNITY & YOUTH SERVICES
PARKS & SPECIAL FACILITIES
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LAND DEVELOPMENT SECTION

PERTAINING TO

TREE PROTECTION & PLANTING REQUIREMENTS

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PART 2. LANDSCAPING AND VEGETATION PROTECTION

2A. GENERAL REQUIREMENTS

Section 60200 Relationship to the Growth Management Plan

The Landscaping and Tree Protection requirements (of the Code) implements several Goals, Objectives and Policies found in the Conservation (C) and Urban Design (UD) Elements of the Growth Management Plan (GMP). The requirements of this Chapter are generally oriented toward maintaining a balance between important environmental and conservation concerns and the need for development (C-Goal 1) and integrating nature into existing and future development (UD-Goal 8). The requirements of this Chapter provide for the conservation of soils, native vegetative communities and urban woodlands (C-Policies 1.4.5, 1.4.10; UD-Policies 8.1.1, 8.1.2); require protection of trees during development (C-Policy 1.4.11; UD-Objectives 8.6; UD-Policy 8.6.1) and set standards for buffering and screening and for promoting. the use of xeriscape® (C-Policy 1.4.12; UD-Obj. 8.1; UD-Policy 8.1.1). The Code also sets standards for planting lake edges (C-Policy 1.4.0; UD-Objectives 8.1; UD-Policy 8.2.1) and for vegetative screening of above ground utilities (UD-Objectives 9.1; UP-Policy 9.1.1).

Section 60,201 Purpose of Landscape Regulations

The purpose of the landscape regulations is to protect the general welfare of Orlando citizens and visitors by establishing minimum standards for the protection of trees and native plant communities, to promote water conservation, to enhance the city's appearance, and to provide for the proper installation and maintenance of landscapes. The landscape standards are intended to eventually result in an urban environment which is in harmony with the surrounding natural environment. The landscape regulations are to achieve these objectives:

Conserve water by preserving existing native plants which are adapted to Central Florida seasonal precipitation rates, encouraging the use of plant materials specifically suited to the growing conditions of a particular location, and establishing standards for installation and maintenance of landscape plants and irrigation systems.

Improve the appearance of commercial. industrial. and residential areas and to perpetuate Orlando's image as 'The City Beautiful".

Improve environmental quality through the retention and installation of vegetation, including improved air and water quality through the removal of carbon dioxide and the generation of oxygen, facilitation of aquifer recharge and reduction of storm water runoff, decrease air and noise pollution, prevent soil erosion and sedimentation, mitigate heat and glare through shade and evapotranspiration.

Increase land values by providing landscaping as a capital asset.

Provide human psychological and physical benefits through the *use* and arrangement of landscape materials to break up and moderate the monotonous and harsh urban built environment.

Provide a haven for urban wildlife.

To assist in the protection of endanrered or threatened plant species, habitats, and of rare or endanger& ecosystems as regulated by Cnapter 63, Part 2, Environmental Protection.

Section 60202 Application of Landscape Regulations

The landscape regulations apply to all real property situated in the corporate limits of the City of Orlando. Whenever plant materials are required for parking lot landscaping, buffer-yards or any purpose required by this Chapter, they shall be installed and maintained in accordance with the standards and requirements of this Parr. No variance granted to the width of required parking lot landscaping areas or the width of required bufferyards specified by this Chapter shall constitute a variance to the quantity of plantings required by this Chapter, unless specifically authorized by the Board of Zoning Adjustment

Section 60.203 Variances of Development Standards in Connection with Tree Points

Administrative Variances - The Zoning Official shall be authorized to approve variances in accordance with the procedures of Chapter 65, Part 2U, for the following development standards in order to protect large size trees only, so that tree points may be awarded:

(a) Setbacks for principal and accessory buildings and structures, and vehicular use areas. Maximum reduction = 20%.

(b) Parking (number of spaces) standards. Maximum reduction = 5% or one space (whichever is more).

(c) Parking space standards up to 1.5 feet from the required depth.

BZA Variances Initiated Bv Applicant - Refer to Chapter 65, Part 2U, for procedures applying to variances reviewed by the Board of Zoning Adjusunent. Tree Protection is an allowable justification for a variance.

BZA Variances Initiated Bv Zoning Official - Where the Zoning Official finds that tree points could be awarded for a specimen or historic tree through approval of reasonable variances by the Board of Zoning Adjusunent, he may so notify the applicant and refer the matter to the Board for review. In such cases, no application for a tree removal permit shall be approved unless the variance is denied by the Board, and no application fee shall be charged for the variance. Realizing the extra time involved, the Zoning Official shall seek such review only in exceptional cases.

Section 60.204 Average-lot Development and Cluster Development To Protect Trees

The City Council may require Avenge-lot Development (see Chapter 58, Part 3C) or Cluster Development (see Chapter 58. Part 3D) as a condition of Preliminary Plat approval for any 1 or 2 family development or portion thereof where, in the review of the Plat, they find that the design alternatives are essential for the protection of existing trees on the development site.

Section 60.205 Subdivision and Street Design Modifications To Protect Trees

Desion Modifications - The City Engineer shall be authorized to approve design modifications to the Subdivision and Street Design Standards of Chapters 60 and 61 according to Part 3E of Chapter 65, Modification of Requirements, in order to protect trees and native plant communities.

Joint-Use Driveway - Wherever a joint-use driveway is required by Chapter 61 of this Code or installed at the option of the applicant, the Zoning Official shall be authorized to make adjustments in the location and design of landscaped areas required on the affected building site(s), but not in the number of plantings required.

Section 60.206 Maintenance of Existing or Installed Landscapes

Trees installed or retained as required by this Chapter shall not be topped or severely pruned so as to appear stunted. Trees shall be pruned as needed to maintain health and form in such a way that retains or improves the natural form of that tree species. Improper pruning techniques shall be as determined by the Parks Official. All tree pruning shall be conducted according to the latest edition of the National Arborist Association standards, which are hereby incorporated by this reference.

All landscaping installed or retained to meet the requirements of this chapter shall be maintained in a healthy and growing condition. Installed or retained vegetation which dies after development has compietd shall be replaced to meet the requirements of this Chapter within thirty (30) days. Shrubs required by Subparts 2E and 2F as part of a hedge or durable landscape screen shall be maintained at the minimum required height or greater. Irrigation systems installed to meet the requirements of this Chapter shall be maintained in proper operating condition.

INSTALLATION STANDARDS FOR ALL LANDSCAPING

Section 60.207 General Reauirements

The property owner, occupant and/or agent shall be jointly and individually responsible for installing landscaping, according to accepted commercial planting procedures, using plant materials of species which are native or adapted to the Orlando area.

Existing Plant Material - The Zoning Official may adjust the zppiication of standards contained herein, in pan or in whole. to allow credit for healthy plant material on a building site prior or subsequent to its development, if such an adjustment is consistent with the intent of this Chapter. Existing plant material native to Central Florida should, in particular, be retained.

Protection - The Zoning Official shall be authorized to require landscaped areas to be protected from vehicular encroachment with effective wheel stops or curbs.

Anchoring - Wherever new medium or large trees are installed they shall be provided with anchoring to maintain the tree in a vertical upright position for a period of at least one year, in order to provide sufficient time for their roots to become established. Single staking of trees shall be prohibited.

Tree Health - Trees used to satisfy the requirements of this Parr shall be in good or fair health as defined by this Chapter. A determination as to the health of trees need not be made in advance of their use; however, poor tree health may be established at any point during the development process in either one of the following ways:

(a) The applicant may Claim poor tree health as a reason to remove an existing tree which would otherwise be required to be retained to satisfy the requirements of this Part. To do so, the applicant shall submit an expert evaluation by a landscape architect, horticulturalist, urban forester or other expert as part of his tree removal permit application.

(b) The Parks Official in coordination with the Zoning Official may claim poor tree health as a reason for disallowing a new or existing tree for use in satisfying the requirements of this Part. The applicant may rebut such a claim by submitting an expert evaluation by a landscape architect, horticulturalist, urban forester or other expert to the Parks Official, who shall make a final determination. If the expert evaluation recommends recuperative measures to improve tree health, the Parks Official may condition the retention of the tree upon these measures, and may reassess the health of the tree after a one-year recuperation period.

conformanclant materials used in e with provisions of this Pan shall equal or exceed the standards for Florida No. 1 as established and nvised by the Florida Department of Agriculture. Grass sod shall be clean and reasonably free of weeds and noxious pests or disease. Grass seed used shall meet requirements of the FDOA quality control program.

Irrioation - Irrigation systems shall he installed according to manufacturer's specifications and the Standard Plumbing Code. All automatic irrigation systems as required by this Part shall be maintain& in proper operating condition. Automatically controlled systems shall be operated by an irrigation controller that can provide water to high, moderate, and low water use zones and turfgrass areas on different schedules. Moisture sensor and/or rain gauge equipment shall be required on automatic irrigation systems to avoid irrigation during periods of sufficient rainfall. The use of low volume, emitter or target irrigation is preferred for trees, shrubs and ground covers. Irrigation systems shall be operated to conform to St. John's River or South Florida Water Management District mandatory water use restrictions, when applicable.

Berms - When a berm is used to form a visual screen in lieu of, or in conjunction with, a hedge or wall, such berm shall not exceed a slope of 3:1, and shall be completely covered with shrubs, grass or other living ground cover.

Ground Covers - Ground covers shall be planted in a manner so as to present a finished appearance with reasonably complete coverage under normal growing conditions within 12 months after planting. All

improved property in the City, including residential, shall have ground cover or turfgrass installed and maintained in those areas not otherwise planted or covered by structures or pavement.

Hedges - Shrubs used to fonn hedges shall be of a nondeciduous species. shall be a minimum of 24 inches in height above grade at the time of planting and shall be spaced not more than 36 inches apart and maintained so as to form a continuous visual screen 30 inches in height above grade, under normal growing conditions, within one year after planting.

Turf Grass - Grass shall be of a species normally grown as permanent lawns in the City of Orlando. Grass areas may be sodded, plugged, sprigged or seeded except that solid sod shall be used in swales or other areas subject to erosion.

Tree & Shrub Installation - Grow bags and containers shall be completely removed from the root ball prior to planting. Synthetic burlap shall be sliced in both directions on the sides of the root ball and removed from the top 1/3 of the rootball. All twine or wire should be cut off from around the trunk at the top of the rootball. Trees and shrubs shall be mulched to a minimum depth of 2 inches with organic mulch at least to the perimeter of the rootball.

STANDARDS FOR TREES

Section 60.208 General Requirements

Tree Points - Wherever the requirements of this Chapter specify the attainment of a certain number of tree points, the number of points awarded per tree shall be as shown in Figure 1, Tree Points.

Canopy and Understory Trees - The term “canopy tree” refers to a species of tree which normally grows to a mature height of 40 ft. or more, while "understory tree” refers to a species which normally grows to 15-35 ft. Wherever the requirements of this Chapter specify the use of canopy trees or understory trees, refer to Figure 1. Approved Plant List, to determine the approved tree species within each of these careaories.

Small. Medium and Large Trees - The terms “small”, “medium” and “large” refer to the size of a tree at the time it is installed or retained, regardless of its species. Whenever the requirements of this Part specify the use of small, medium or large trees, the minimum standards of Figure 1, Tree Points, shall apply. Small trees shall meet both the height and caliper standards of Figure 1, Tree Points: medium and large trees shall meet the height, or caliper to qualify.

Approved Plant Species - The landscaping requirements of this Chapter shall be achieved by using any of the plant species shown in Figure 2, Approved Plant List.

Minimum Planting Area for Installed Trees - The minimum planting area for all installed trees shall be as follows:

Installed canopy trees: 5' radius from trunk perimeter
Installed understory trees: 2.5' radius from trunk perimeter

FIGURE 1 TREE POINTS

	Retained Native	Installed Native	Non-Native
Small Tree			
1.5" Caliper, 10' Height	1.0	1.0	0.5
2.0" Caliper, 12' Height	1.5	1.5	1.0
3.0" Caliper, 14' Height	2.5	2.5	1.5
Medium Tree			
4.0" Caliper, 15' Height	3.0	3.0	2.0
25' Height	3.5	3.5	2.5
30' Height	4.0	4.0	3.0
35' Height	4.5	4.0	3.5
Large Tree			
40' Height +	5.0	5.0	4.0
Specimen Tree or or Historic Tree	7.0	n.a.	5.0

Native Palm Trees - one tree point (1.0) for every three Palms over 10' in height
Non-Native Palm Trees - one-half (.5) tree point for every three Palm over 10' in height
Native Plant Communities - individual trees count for point values above

Tree caliper is measured 12 inches above the soil line for installed trees and 4.5 feet above the soil line for all existing trees. (DBH)

2B. TREE AND VEGETATION PROTECTION

Section GO.210 General Requirements

Purpose - The purpose of this Part is to provide protective regulations in the City of Orlando.

It is the intent of this Part to promote the community health and welfare by protecting trees and native plant communities for the unique benefits they provide in enhancing community appearance and assisting in the natural control of solar and radiant heat soil conservation, flooding, air pollution and noise. In addition, trees and woodlands offer a haven for community wildlife and provide citizens with psychological relief from the increasing complexities of a manmade urban environment. Further, it is the intent of this Part to enhance the community and its citizenry, and not be punitive or to cause a hardship to any individual, private or public company who use reasonable care and diligence to protect trees and native plant communities within the City of Orlando.

Trees are living things whose survival depends upon the maintenance of adequate nutrition, and the avoidance of life-threatening damage. Because roots are the lifeblood of a tree, construction activities within the dripline of the tree where most of the roots are located, can be especially dangerous to the tree. Cutting and fill, trenching, construction and emplacement of impervious cover are destructive activities.

Trees, as defined, regulated and protected herein, are declared to be a natural public resource and the City of Orlando encourages planting, replacement and protection of trees, as herein set out, in the interest of the health, safety and welfare of present and future citizens of the City of Orlando. To attain that end, it shall be unlawful to cut down, damage, poison or in any other manner destroy or cause to be destroyed any tree or native plant community as covered by the terms of this Part except in accordance with the provisions of this Part.

Section 60.211 Trees Protected by this Part

It shall be unlawful for any *p-son to,* or cause to, destroy, permanently injure or remove any existing 4 inch or larger in caliper tree without first obtaining a Tree Removal Permit, or to encroach within 6 feet of any such tree without first obtaining a Tree Encroachment Permit from the Parks Official or his designee as required by the provisions of Chapter 65.

STANDARDS FOR TREE AND VEGETATION REMOVAL

Section 60212 General Requirements

Removal of existing 4" or larger caliper trees shall be prohibited. However, Tree Removal Permits may be approved where site design modifications are not feasible (see Chapter 65).

Section 60.213 Specimen or Historic Trees

line Parks Official shall be authorized to designate certain existing and/or retained trees as Specimen or Historic Trees, based on their size, age, historic association, species or unique characteristics. Trees so

designated shall be protected without regard to their location, within the jurisdiction of the City. Designation as a Specimen or Historic Tree may occur in any one of the following ways:

(a) An applicant may request such designation as part of any Master Plan, Preliminary Subdivision Plat, Short-Form Subdivision Plat or Preliminary Site Plan application. To do so, the applicant shall submit an expen evaluation by a landscape architect, horticulturalist, urban forester, historian or other horticultural expert as part of the application.

(b) A property owner may request such designation at any time. To do so, the property owner shall submit an expert evaluation by a landscape architect, horticulturalist, urban forester, historian or other horticultural expert.

(c) The Parks Official may make such designation as part of his review of any application for development under this Chapter, stating in writing his reasons for such designation, The applicant may appeal such designation to the appropriate reviewing authority(s) for the application in question

(d) The Parks Official may make such designation as part of an overall tree protection planning program for the City or portion thereof. Such designation shall be subject to approval by resolution of the City Council.

Specimen Trees are trees that have been identified by the Parks Official or other horticultural expert as being of outstanding mature size, excellent form, 2nd a healthy example of the species. Specimen trees shall include Champion trees identified by the Florida Division of Forestry.

Historic Trees shall be described as any healthy tree with a trunk caliper of 30" or more measured at a point 4.5' above ground (dbh). (See Chapter 66 for definition of caliper)

Removal of or encroachment to any designated historic or specimen tree is prohibited unless a tree removal or tree encroachment permit has been approved. (See Chapter 65)

LAND CLEARING

Section 60.214 General Requirements

Purpose - The purpose of this Part is to provide protection to the citizens of Orlando from air pollution, and air-borne construction debris caused by nearby development activity. The practice of land clearing is an established method of developing both large and small properties. Unfortunately, this practice tends to facilitate air pollution by allowing particulate matter to leave its original location and travel via air and wind to adjacent properties. In the Orlando area, this particulate matter is most often in the form of sand. It is not the intent of 'his Part to place undue constraints on development within the City of Orlando, but to protect adjacent property owners from the adverse affects of unavoidable vegetation removal. This Part acts to implement Conservation Policy 1.1.4.

When Land Clearing Reauirements Apply - Prior to the clearing of land in preparation for development, the owner or developer shall be required to obtain all applicable development approvals, including an

Engineering Permit. Tree Removal Permit, Final Plat, Fiial Site Plan Approval, or any other necessary permits as determined by the Zoning Official. The standards and procedures outlined in this Part are inrended to augment other provisions of this Chapter. and should not be construed as permission to destroy valuable wetlands, rare upland ecological communities, wildlife corridors. or the habirat of endangered and threatened species. The requirements of this Pan do not supersede those of the Tree and Vegetation Standards. Rather, this Part shall augment the Tree and Vegetation Standards. It should be noted that the requirements of this Part are designed as an interim measure in the development process. Upon submittal of a site plan for review and approval. the requirements for shade coverage, parking lot landscaping, and bufferyards found in other potions of Chapter 60 shall apply. The land clearing requirements shall not apply to residential buildings sires equal to or less than 10,000 square feet in area_

Section 60.215 Standards for Land Clearing

General Reauirements - Land clearing shall be phased with development. The developer shall be required to provide one of the following protective actions:

(1) Sand Fencing; wherein the developer places a solid or lath fence between the subject property and adjacent propenies;

(a) Fence must be in place one (1) week after the land clearing procedure has taken place.

(b) Fences must be at least four (4) feet in height

(c) Fences must be located within five (5) feet of the subject property line when the entire site is to be clear-cut, or within five (5) feet of the area being clear-cut in a phased project. In other words, the fence must be placed in a location which will effectively screen airborne particulate matter.

(d) Fences may consist of wood fence, lath fence, chain link with slats, semi-solid plastic net or any other marerial that functions to screen wind-blown particles of matter. If a lath fence is chosen, individual strips must be no more than 1/2 inch apart to be effective.

(2) Vegetative Buffer. wherein the developer retains a border of indigenous vegetation at the perimeter of the project. Vegetation buffers may be used in connection with, or instead of, sand fencing. When choosing this alternative, the developer must meet the following standards:

(a) Use of Existing Native Plant Communities - The utilization, or maintenance, of existing native plant material is strongly recommended in vegerative buffer areas. Because native plant communities are often more drought and freeze resistant than non-native species, existing natural ground cover should be retained, along with trees and under-story, wherever possible. Where it is not possible to retain existing native plant communities the vegetative buffer area may be provided with other vegetation approved by The Parks Official. Exisring Tree Protection standards shall apply to the vegetative buffer.

(b) Width of Vegetative Buffer - The width of the vegetative buffer shall be based on the size of the site being clear-cut The graduated width requirements include:

1 Acre to 2 Acres	-	10 foot min. Buffer Required
2 Acres to 5 Acres	-	15 foot min. Buffer Required
5 Acres to 10 Acre	-	20 foot min. Buffer Required
Over 10 Acres	-	25 foot min. Buffer Required

(c) Maintenance of Fencing or Vegetative Buffer - The maintenance of all fences and vegetative buffers shall be the responsibility of the property owner or other owner-authorized entity. Failure to maintain such protective screenings shall be considered a violation of this Part and subject to enforcement in accordance with Chapter 5 of the City Code.

(3) Hay Bales: where the developer places a solid row of hay bales between the subject property and adjacent properties:

(a) Hay bales shall be stacked at least four (4) feet in height.

(b) Hay bales shall be anchored.

(c) Hay bales shall be located within five (5) feet of the subject property line when the entire site is to be clear-cut, or within five (5) feet of the area being clear cut in a phased project. The hay bales shall be placed in a location which will effectively screen airborne particulate matter and prevent soil erosion.

The City Engineer may require, as a condition of any Engineering Permit for land clearing, that cleared land shall not be left in a barren, undeveloped state without commencement of construction or revegetation within 60 days of clearing. Revegetation shall include seeding or sodding with grasses or other groundcover to prevent soil erosion and blowing of airborne particulate matter and debris.

Revegetation of Land is Reauired After Building Demolition - Prior to demolition and removal of existing structures, pavement, and vegetation from a development site, the owner or developer shall be required to obtain all demolition approvals, and Tree Removal Permit(s) as necessary. The Zoning Official may require as a condition of approval for a demolition permit, that sites of demolition shall not he left in a barren, undeveloped state without commencement of vertical construction or revegetation within 60 days of clearing. Revegetation shall include sodding with grasses or other groundcover to prevent soil erosion and blowing of airborne particulate matter and debris.

TREE PROTECTION REQUIREMENTS FOR ALL RETAINED TREES TO BE AWARDED TREE POINTS

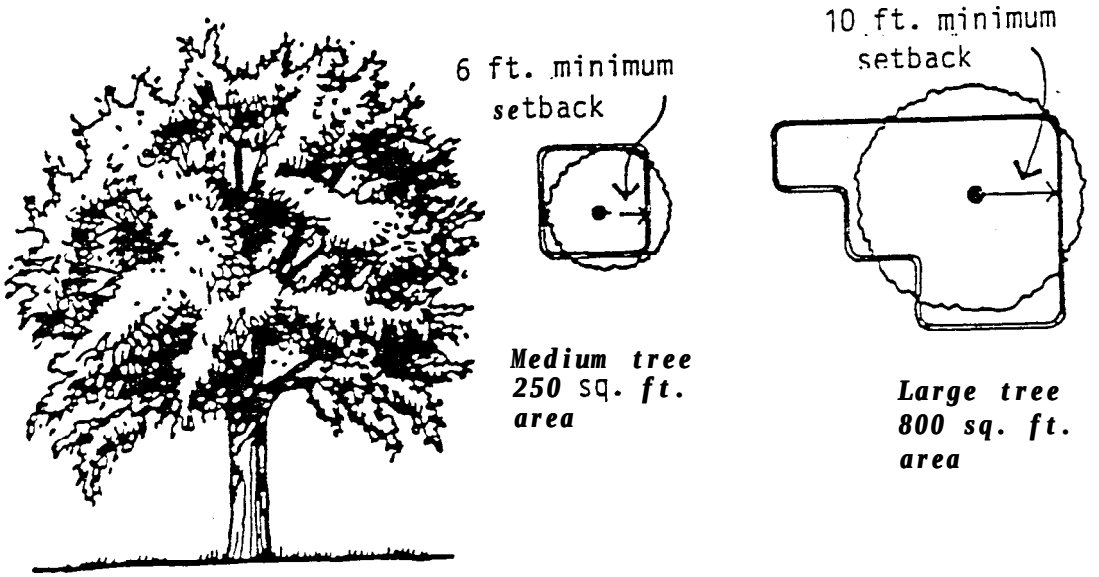
Section 60.216 Minimum Undisturbed Areas

Each retained tree for which tree points are awarded shall be located within an undisturbed area which conforms to the following minimum standards:

	Medium Tree 4" or more in caliper	Historic Specimen or Large Tree
Setback from trunk perimeter	6 ft.*	10 ft.*
Area-single tree	250 sq. ft.	800 sq. ft.
Area-each additional tree in a group**	90 sq. ft.	200 sq. ft.

* Trees located in certain buffet-yards are exempt from these setbacks. See Section 60.263.

** The largest tree in any group will be considered as the first tree for counting purposes. Trunk perimeter is measured from each individual tree in a group.



UNDISTURBED **AREAS**

Retained trees under 4" in caliper shall require the minimum planting area as required by Section 60.208, Minimum Planting Area for installed trees. Existing trees may be relocated on the site as approved by the Parks Official.

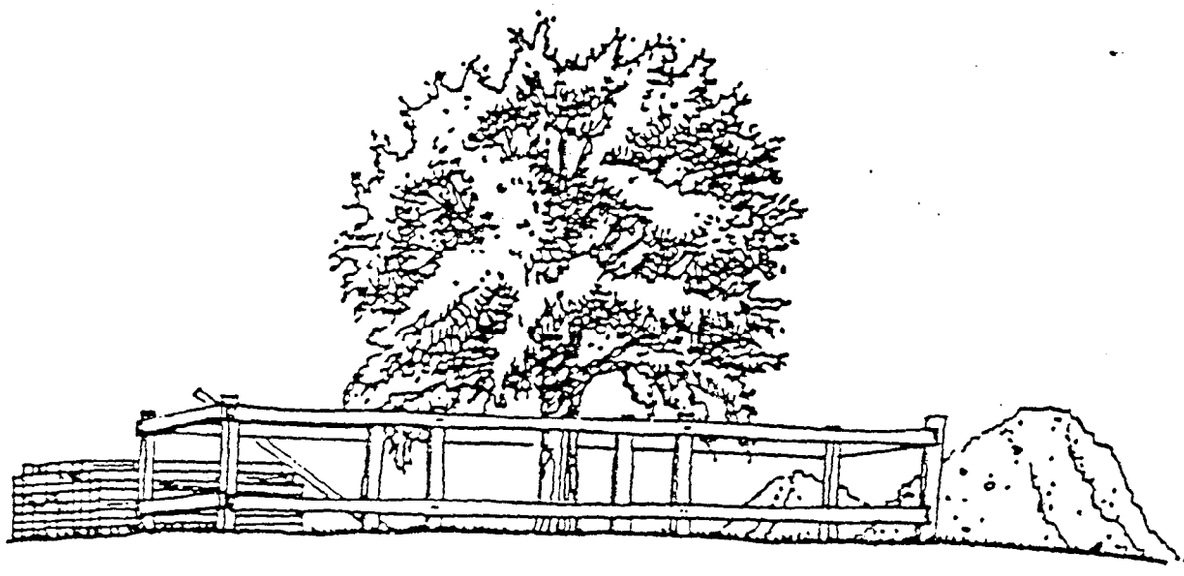
Section 60317 Development Prohibited Within the Undisturbed Area

All development activities except those specifically permitted by Section 60.218 below shall be prohibited within the undisturbed area provided for any tree(s) for which tree points are awarded, including any construction of buildings, structures, paving surfaces, compaction, cutaways, stormwater retention ponds and/or trenching. All temporary construction activities shall also be prohibited within the undisturbed area, including all digging, trenching, construction lay-down areas and parking of construction vehicles or employee vehicles.

Finding alternative parking arrangements for construction crews must be an integral part of the tree protection strategy.

Fencing of Undisturbed Area - Prior to the commencement of construction, the developer shall enclose the entire undisturbed area within a fence or similar barrier approved by the Parks Official as follows:

(a) Wooden (or equivalent) posts at least 1.5 x 3.5 inches shall be implanted in the ground deep enough to be stable and with at least 3 feet visible above the ground.



FENCING OF THE UNDISTURBED AREA

(b) The protective posts shall be placed not more than 6 feet apart, and shall be linked together by a rope, chain, or net fence fabric.

Filling and Elevation Changes - The existing elevation around the retained tree or native plant community shall not be changed within the undisturbed area, except as approved by the Parks Official. (See Chapter 65, Tree Removal and Encroachment Permits.)

Section 60.218 Permitted Activities Within the Undisturbed Area

A Tree Encroachment Permit is required for all activities in the undisturbed area except the following:

Tunneled Utility & Irrigation Lines - Utility lines which are tunneled beneath tree roots in order to protect feeder roots, rather than trenched.

Sodding and Ground Cover - Placement of sod or other ground covers, and the preparation of the ground surface for such covers.

Occasional Parking After Development - The undisturbed area may be used for occasional parking after the issuance of a Certificate of Occupancy for the building site, when this is approved by the Planning Official in accordance with Section 60.

Section 60.219 Unimproved Reservation of Required Parking Area in Connection with Tree Points

The Planning Official may authorize that up to 15% of the required parking spaces on a building site remain-as unimproved reserve area(s) located within the undisturbed area required by this Part in order to be awarded tree points. The unimproved reserve area(s) shall conform to the following standards:

Number of Reserved Spaces Per Tree - The maximum amount of unimproved reserve area which may be approved for each tree protected shall be as follows:

Small Tree	- NA
Medium Canopy or Understory Tree	- 1 space
Large Canopy Tree	- 2 spaces

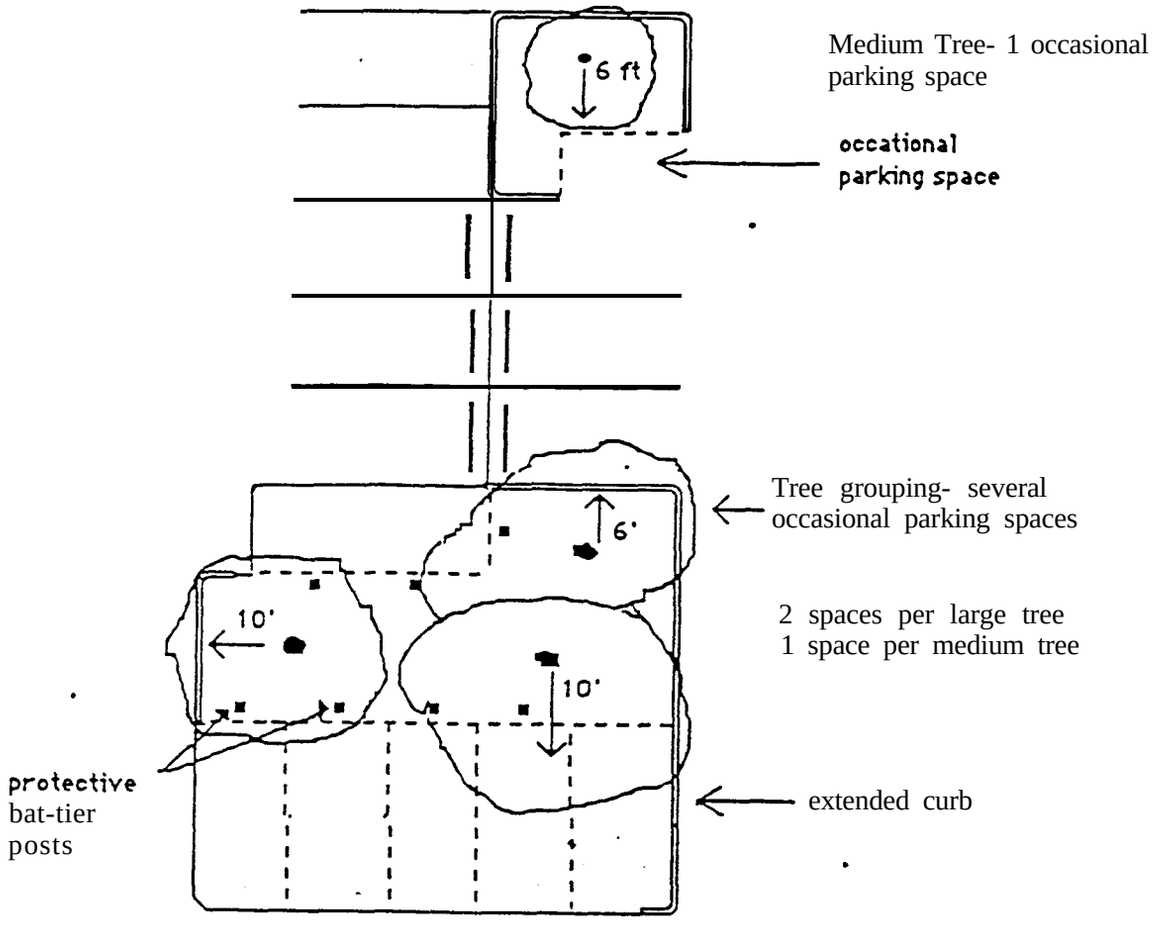
Use for Occasional Parking - The Planning Official may allow the parking spaces in the unimproved reserve area(s) to be used for occasional parking only (approximately 1-2 times per week), provided that:

(a) The Planning Official shall find that the spaces are located at the periphery of the building site, or otherwise so located that they are unlikely to be used on a continuous basis.

(b) All accessways and aisles serving the occasional parking spaces shall be paved.

(c) Access to the occasional parking spaces shall not be blocked by curbing or other barricades which would prevent their occasional use.

(d) Where necessary, the Planning Official may require posts or equivalent barriers to protect the tree(s) from cars parking within the reserved area.



Occasional Parking Alternatives

REQUIREMENTS FOR OTHER TREES (NOT AWARDED POINTS)

Section 60.2220 Minimum Setback to Protect Trees

No material, machinery or temporary soil deposits shall be placed within 6 feet of any installedor retained tree(s) protected by this Pan. No structure or impervious paving shall be located within a 6 foot radius of the trunk perimeter of any such tree(s). An historic or specimen tree shall require additional space as may be determined by the Parks Official.

Section 60221 Compensatorv Pruning

The Parks Official shall be authorized to require pruning of the crown of any protected tree not being counted for tree points, where he finds that such pruning is essential to compensate for the stress placed upon the tree by the encroachment, The Parks Official shall specify the proportionate amount of the required pruning. The crown must be pruned by removing lateral branching and trimming, rather than topping. All pruning practices shall conform to the National Arborist's Association Standards for Trees.

Section 60.222 Protective Barrier Required

Each 3 inch or more in caliper size tree protected by this Part shall be protected from damage during construction by a barrier composed of wood, rope, wire, braces, fabric fence, or similar non-injurious material.

Section 60223 Average-Lot Development and Cluster Development to Protect Trees

The City Council may require Average-lot Development (see Chapter 58, Part 3D) or Cluster Development (see Chapter 58, Part 3C) as a condition of Preliminary Plat approval for any 1 or 2 family development or portion thereof where, in the review of the Plat, they find that the design alternatives are essential for the protection of existing trees on the development site.

2C.

Section 60230 General Reauirements

Purpose of Landscape Design Standards - The Landscape Design standards are intended to protect the public health, safety and welfare by promoting the preservation of existing trees and native plant communities, furnishing an approved Iisr of plants specifically adapted to Central Florida, promoting site specific placement of plant species, and incorporating xeriscape principles into landscape and irrigation design to conserve the potable water supply. All landscaping within the corporate limits of Orlando shall be designed, installed, and maintained in conformance with this Part.

Street Trees

Street trees are required as follows:

(a) Location - Canopy trees shall be planted in the parkways on both sides of the street, at intervals of not more than one tree per 50 lineal feet or less than one tree per 100 lineal feet, the exact distance dependent on the judgment of the Parks Official to meet local conditions, except where a tree planting will jeopardize the property functioning of public utilities, conflict with other City ordinances, or be in too close proximity to existing natural trees. Where an existing street abutting a development is deficient in street trees, sufficient trees shall be planted to bring the street into conformity with these requirements. Small and medium sized installed canopy trees may be planted in a parkway 6 feet in width or greater.

(b) Size and Species - All street trees shall be canopy trees as defined in Chapter 66 and when installed shall be of at least 12 feet in height and 2 inches caliper. The species of canopy tree shall be determined by the Parks Official, based on the Approved Plant List contained in Chapter 60. Other species may also be used if approved in advance by the Park Official as being equivalent in function and quality.

Streetscaue designs - Streetscape designs in Activity Centers and Mixed Use Corridor Zoning Districts, or where insufficient parkway exits, should be exempt from the minimum planting areas. The streetscape planting design plans and details shall be subject to approval of the Parks Official. Streetscapes in the AC-3A Downtown Metropolitan Core District shall be designed as required in Chapter 63, Part 3.

Tree Points - Wherever the requirements of this Chapter specify the attainment of a certain number of tree points, the number of points awarded per tree shall be as shown in Figure 1. Existing trees shall be retained as required by Section 60.216 - 60.219.

Replacement of Removed Trees - Qualifying existing trees shall be preserved whenever feasible in order to meet the tree point requirements. Wherever the removal of trees on a development site would result in failure to meet the minimum tree point standards, replacement trees shall be planted in sufficient number and size to meet these standards.

Section 60231 Approved Plant Species

All plant material selected to meet the requirements of this Part shall be chosen from the Approved Plant List, Figure 2, or as approved by the Zoning Official. Other plant species may be included on the development site (except Prohibited Species, Figure 3) but they shall not be counted toward meeting the requirements of this Pan.

All newly installed plants require regular, moderately applied irrigation for the first one or two years to become established. The Water Zones shown below reflect water requirements for an established, healthy, and mature plant, but not necessarily what moisture levels are found in its native habitat or the ideal cultural conditions for the species.

FIGURE 2
APPROVED PLANT LIST FOR ORLANDO, FLORIDA

WATER ZONE KEY:

H = High water use plant species associated with wetlands or moist soils; requires supplemental irrigation in addition to natural rainfall. This zone includes most manicured turfgrass areas.

M = Moderate water use, drought tolerant plant species that survive on natural rainfall; requires supplemental irrigation during seasonal dry periods to maintain attractive appearance. This zone includes St Augustink, Bahia, and other turf grass areas.

L = Low water use drought tolerant plant species; will survive on natural rainfall without supplemental irrigation.

BOTANICAL NAME	COMMON NAME	WATER ZONE
NATIVE CANOPY TREES (Mature Size 40' or more in Height)		
Acer rubrum	Red Maple	H, M
Carya floridana	Florida Scrub Hickory	M, L
Carya glabra	Pignut Hickory	M, L
Celtis laevigata	Hackberry	M, L
Liquidambar styraciflua	Sweetgum	H, M
Liriodendron tulipifera	Tulip Tree	M
Magnolia grandiflora	Southern Magnolia	M, L
Nyssa aquatica	Tupelo Gum	H
Nyssa sylvatica	Black Gum/Swamp Tupelo	H
Pinus clausa	Sand Pine	L
Pinus Eliotti var. Elliottii	North Florida Slash Pine	L
Pinus palustris	Longleaf Pine	M, L
Pinus serotina	Pond Pine	H, M
Pinus taeda	Loblolly Pine	L
Plantanus occidentalis	sycamore	H, M, L
Quercus falcata	Southern Red Oak	L

BOTANICAL NAME	COMMON NAME	WATER ZONE
Quercus laurilfolia (hemispherica)	Laurel Oak	M, L
Quercus laevis	Turkey Oak	L
Quercus michauxii	swamp Chestnut oak	H, M
Quercus nigra	Water Oak	H, M
Quercus shumardii	Shumard Oak	H, M, L
Quercus virginiana	Live Oak	M, L
Tilia heterophylla	Southern Basswood	M
Taxodium ascendens	Pond Cypress	H
Taxodium distichum	Bald Cypress	H, M
Ulmus alata	winged Elm	M, L
Ulmus americana var. floridana	Florida Elm	M
NON-NATIVE CANOPY TREES		
Carya illinoinensis	Pecan	H, M
Fraxinus pennsylvanica	Green Ash	H, M
Ginko biloba	Ginko	M, L
Liquidambar formosana	Fonnosan Gum	M, L
Platanus orientalis	Oriental Syeamore	H, M, L
Salix babylonica	Weeping Willow	H
Ulmus parvifolia	Chinese Elm	M, L
NATIVE UNDERSTORY TREES (Mature Size 12 to 35' Height) AND PALMS		
Amelanchier arborea	Serviceberry	H, M
Asimina ailoba	Paw Paw	H, M
Carpinus caroliniana	American Hornbeam	H
Chionanthus virginicus	Fringetree	M, L
Comus florida	Flowering Dogwood	M
Crataegus marshalli	Parsley Hawthorn	H, M, L
Crataegus opaca	Mayhaw	H, M
Crataegus viridis	Green Hawthorn	H, M
Diospyros virginiana	Common Persimmon	H, M, L
Fraxinus caroliniana	Carolina Ash	H, M
Gordonia lasianthus	Loblolly Bay	H
Halesia diptera	Silverbell	M
Ilex cassine	Dahoon Holly	H, M
Ilex decidua	Decidous Holly	H, M
Ilex opaca (or x attenuata)*	American Holly	H. M, L
Ilex vomitoria	Yaupon Holly	H, M, L
Juniperus salicicola	Southern Juniper	L
Juniperus virginiana	Eastern Red Cedar	L
Magnolia virginiana	Sweetbay	H. M
Malus angustifolia	Southern Crabapple	H, M
Myrica cerifera	Wax Myrtle	M, L

*includes cultivars 'East Palatka', 'Savannah', 'Howard', etc.

BOTANICAL NAME	COMMON NAME	WATER ZONE
Osmanthus americanus	Devilwood	H, M, L
Ostrya virginiana	Eastern Hophornbeam	M
Oxydendron arboreum	Sourwood	M
Persia borbonia	Red Bay	H, M, L
Prunus angustifolia	Chickasaw Plum	M, L
Prunus caroliniana	Cherry Laurel	M
Quercus chapmanii	Chapman Oak	L
Quercus incana	Bluejack Oak	L
Quercus myrtifolia	Myrtle Oak	L
Quercus stellata	Sand Post Oak	L
Rhamnus caroliniana	Buckthorn	M
Sabal palmetto	Sabal Palm/Cabbage Palm	H, M, L
Salix caroliniana	coastal Plain willow	H
Sapindus saponaria	Soapberry	M, L

NON-NATIVE UNDERSTORY TREES, PALMS Ah?) CYCADS:

Arecasuum romanzoffianum	Queen Palm	M, L
Butia capitata	Pindo Palm	M, L
Chamaerops humulis	European Fan Palm	M, L
Cupressocyparis leylandii	Leyland Cypress	M
Cupressus sempervirens	Italian cypress	M, L
Cycas circinalis	Queen Sago	H, M, L
Diospyros kaki	Japanese Persimmon	M, L
Eriobotrya japonica	Loquat	M
Lagerstroemia indica	Crape Myrtle	M, L
Ligustrum japonicum	Waxleaf Privet	M, L
Ligustrum lucidum	Glossy Tree Privet	M, L
Livistonia chinensis	Chinese Fan Palm	M, L
Magnolia soulangeana	Saucer Magnolia	H, M
Magnolia stellata	Star Magnolia	H, M
Parkinsonia aculeata	Jerusalem Thorn	M, L
Phoenix canariensis	Canary Island Date Palm	M, L
Phoenix reclinara	Senegal Date Palm	H, M, L
Photinia x Fraser-i	Fraser's Photinia	M
Prunus campanulata	Taiwan Flowering Cherry	H, M
Pyrancantha coccinea	Firethorn Pyracantha Tree	M, L
Pyrus calleryana "Bradfordi"	Bradford Pear	M
Pyrus calleryana "Kawakami"	Kawakami Pear	M
Tabebuia spp.	Trumpet tree	M
Trachycarpus fortunei	windmill Palm	M, L
Ulmus parvifolia "Drake"	Drake Elm	M, L
Ulmus pumila	Dwarf Siberian Elm	M, L
Washingtonia robusta	Washington Palm	M, L

BOTANICAL NAME	COMMON NAME	WATER ZONE
NATIVE SHRUBS; SMALL PALMS AND CYCADS:		
Aesculus pavia	Red Buckeye	H, M, L
Baccharis halimifolia	Groundsel Tree	H, M, L
Befaria racemosa	Tar-Flower	M, L
Bumeli a reclinata	Slender Buckthorn	M
Bumelia tenax	Tough Bumelia	M
Callicarpa americana	Beautyberry	H, M, L
Calycanthus floridus	Sweetshrub	H, M
Cephalanthus occident&is	Common Buttonbush	H
Cemtiola ericoides	Rosemary	M, L
Clethra alnifolia	Sweet Pepperbush	H. M
Euonymus americana	Brook Euonymus	H, M
Forestiera segregata	Florida Privet	M
Hamamelis virginiana	Witch Hazel	H, M
Hamelia patens	Firebush	L
Hibiscus coccineus	Scarlet Hibiscus	H, M
Hydrangea quercifolia	Oakleaf Hydrangea	H, M
Hypericum spp.	St John's Wort	H, M
Ilex cassine	Dahoon Holly	I-I, M
Ilex glabra	Gallberry	M, L
Ilex vomitoria "nana"	Dwarf Yaupon Holly	M, L
Illicium floridanum	Florida Anise	H, M
Illicium parviflorum	Yellow Anise	H, M
Lantana depressa	Yellow Pineland Lantana	M, L
Lantana camara	Lantana	M, L
Leucothoe axillaris	Leucothoe	H
Lindera benzoin	Spice-Bush	H, M
Lycium carolinianum	Christmasberry	M, L
Lyonia spp.	Fetter-bush	H, M, L
Rhapidohyllum hysuix	Needle Palm	H, M
Rhododendron austrinum	Florida Flame Azalea	H
Rhododendron canescens	Sweet Pinxter Azalea	H
Rhododendron chapmannii	Chapman Rhododendron	H
Rhododendron riscosum	Swamp Honeysuckle Azalea	H
Sabal etonia	Scrub Palmetto	M, L
Sabal minor	Dwarf Palmetto	H, M, L
Sambucus simpsonii	Florida Elderberry	H, M
Serenoa repens	Saw Palmetto	M, L
Styrax americanus	Snowbell	H
Vaccinum arboreum	Sparkleberry	H, M, L
Vaccinum myrsinites	Shiny Blueberry	H, M, L
Viburnum obovatum	Walter Viburnum	H, M
Yucca aloifolia	Spanish Bayonet	M, L
Yucca gloriosa	Spanish Dagger	M, L
Yucca smalliana	Bear Grass	M, L

BOTANICAL NAME	COMMON NAME	WATER ZONE
Zamia floridana	Coontie	M, L
NON-NATIVE SHRUBS; SMALL PALMS AND CYCADS:		
Abelia grandiflora	Abelia	M
Agave americana	Century Plant	L
Ardisia crispa (or crenata)	Coralberry Ardisia	H, M
Beloperone guttata	Shrimp Plant	H, M
Buddleia asiatica	Asian Butterfly Bush	M
Buxus microphylla	Japanese Boxwood	M
Buxus sempervirens	English Boxwood	M
Camellia japonica	Camellia	M
Camellia sasanqua	Sasanqua Camellia	H
Cassia spp.	Cassia	H, M
Codiaeum variegatum	Croton	H, M, L
Crinum asiaticurn	Crinum Lily	M
cycas revoluta	King Sago	H, M, L
Duranta repens	Golden-Dewdrop	M
Eleagnus pungens	Silver-thorn	M, L
Eugenia uniflora	Surinam Cherry	M
Fatsia japonica	Fatsia	H, M
Feijoa sellowiana	Feijoa	M
Fortunella japonica	Kumquat	M, L
Gardenia jasminoides	Gardenia	H, M
Galphimia (or Thryallis) glauca	Thryallis	M, L
Hydrangea macrophylla	Garden Hydrangea	H
Ilex cornuta	Chinese Holly	M
Ilex comuta "Burfordi"	Burford Holly	M
Ilex crenata	Japanese Holly	H, M
Illicium anisatum	Star Anise	H, M
Juniperus chinensis	Chinese Jumper	M, L
Juniperus spp.	Jumpers	M, L
Ligustrum japonicum	Japanese Privet	M, L
Lonicera fragrantissima	Fragrant Honeysuckle	H, M
Loropetalum chinense	Chinese Witch Hazel	H, M
Mahonia Bealei	Leatherleaf Mahonia	H, M
Mahonia fortunei	Chinese Mahonia	H, M
Malpighia coccigera	Holly Malpighia	M
Michelia figo	Banana Shrub	H, M
Nandina domestica	Heavenly Bamboo	H, M, L
Nerium oleander	Oleander	M, L
Phoenix roebelinii	Pygmy Date Palm	H, M
Photinia Fraseri	Fraser's Photinia	M
Pittosporum tobira	Pittosporum	H, M
Podocarpus macrophyllus	Podocarpus	M, L
Podocarpus Nagi	Nagi Podocarpus	M
Plumbago auriculata	Plumbago	H, M, L